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Thunderstorms and Lightning

It's estimated that at any given moment, nearly 2,000 thunderstorms are in progress over the earth's surface, and lightning strikes the earth 100 times each second. There are about 45,000 thunderstorms daily and 16 million annually around the world. There are at least 100,000 thunderstorms annually across the United States. On average, there are about 100 people killed and 250 injured by lightning each year in the United States. Property loss from lightning strikes is estimated in the hundreds of millions of dollars annually.

Lightning

Generally, most people do not perceive lightning as a major hazard. Many deaths and injuries could be avoided if people would have more respect for lightning. Michigan ranks 11th nationwide in deaths from lightning, and second in injuries. According to National Weather Service statistics for a 30-year period, 88 deaths and 570 injuries occurred in Michigan as a result of lightning. Over 80 percent of these injuries and deaths occurred in the months of June, July and August.

Large outdoor gatherings are particularly vulnerable to lightning strikes, which could result in many lightning related injuries and deaths. For example, in August 1975, 90 people were injured by a lightning strike at a campground near Leslie (Ingham County).

Lightning Safety Rules

- Check the latest weather forecast and keep an eye on the sky. At signs of an impending storm - such as towering thunderheads, darkening skies, lightning and increasing wind - head for shelter and tune in the radio or television for weather information.
- When a thunderstorm threatens, stay indoors. Stay clear of open doors, window, fireplaces, radiators, metal pipes, stoves, sinks and electrical appliances. Personal appliances such as electric hair dryers and razors should not be used until the storm is over. Delay telephone use as well.
- If you are caught outside, do not stand underneath a tall isolated tree or a utility pole. Avoid projecting above the surrounding landscape. In a wooded area, seek shelter in a low area under a thick growth of small trees. In open areas, go to a low place such as a ravine or valley.
- Do not swim or stay in a boat during a thunderstorm.
- Get off bicycles, motorcycles or golf carts.
- Golfers should put down their clubs. Stay away from wire fences, metal pipes and rails. If you are in a group out in the open, spread out, keeping people several yards apart.
- Open agricultural field work should be stopped, and shelter should be sought. Tractors in open fields are often struck by lightning.
- Remember, lightning may strike miles from the parent cloud. Strikes of up to seven miles ahead of a storm have been documented. Precautions should be taken even though the thunderstorm is not overhead.

- If you are caught in the open, far from shelter, and you feel your hair stand on end, lightning may be about to strike you. Crouch on the balls of your feet. Place your elbows on your knees and cover your ears with your hands. Do not lie flat on the ground.

First Aid

Persons struck by lightning receive a severe electrical shock and may be burned, but *they carry no electrical charge and they can be handled safely.*

Someone who appears to have been killed by lightning often can be revived by prompt action.

An American Red Cross first aid course provides excellent instruction on how to render aid to a person who has been struck by lightning.

Thunderstorm

Thunderstorms are generated by temperature imbalances in the atmosphere. These storms are characterized by strong winds, heavy precipitation (rain or hail), lightning and thunder. A severe thunderstorm is classified by the National Weather Service as a storm that has winds of 58 mph or more, or has hailstones of 3/4 inch in diameter.

Thunderstorm Offspring

Flash floods can result from locally heavy rain associated with a thunderstorm.

Hailstones are precipitation in the form of ice that form during some thunderstorms. Hail can be devastating to agricultural crops and can cause heavy damage to automobiles, aircraft, roofs and windows.

Downbursts are intense concentrations of sinking air which fan out upon striking the earth's surface, producing damaging winds. Frequently, damage that is attributed to tornadoes is actually caused by the straight winds of a downburst.

Tornadoes always spawn from thunderstorms, but not every thunderstorm is intense enough to support tornado development.

Thunderstorm Watches and Warnings

- A **SEVERE THUNDERSTORM WATCH** is issued when weather conditions are favorable for the development of severe thunderstorms. Watches are usually issued for large areas of lower Michigan and typically last for 2 to 6 hours.
 - The watch period gives you time to prepare for a possible storm. When Midland County is within a severe thunderstorm area, you should place objects like trash cans and bicycles indoors. Make sure the entire family is informed of the

watch. Keep an eye out for changing weather conditions and listen for updated weather statements and warnings.

- A **SEVERE THUNDERSTORM WARNING** is issued by the National Weather Service Office at White Lake whenever a severe thunderstorm has been sighted or is strongly indicated by radar. Warnings are usually 30 to 60 minutes long.
 - Act immediately when you first hear the warning. If severe weather is reported near you, seek shelter immediately. If not, keep a constant lookout for severe weather, and stay near shelter.